



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/596,656

10/04/2006

Sebastien Bardon

Q95593

8871

23373 7590 11/19/2009  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

ORLANDO, AMBER ROSE

ART UNIT

PAPER NUMBER

1797

NOTIFICATION DATE

DELIVERY MODE

11/19/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM  
USPTO@SUGHRUE.COM

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,656	<b>Applicant(s)</b> BARDON ET AL.	
	<b>Examiner</b> AMBER ORLANDO	<b>Art Unit</b> 1797	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This action is in response to the correspondence filed 07/31/2009.

Claim 1 has been amended.

Claim 11 is new.

Claims 1-11 are rejected.

Claims 1-11 are pending and have been examined.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Merriman US 2,952,579.

3. For claim 10, Merriman reference disclose the reinforcement means comprises at least one mesh-like reinforcement element which has independent coherence and which comprises at least one active portion which is generally of substantially planar form (claim 1).

4. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Adiletta US 5,228,891.

5. For claim 10, the Adiletta reference, the reinforcement means comprises at least one mesh-like reinforcement element which has independent coherence and which

Art Unit: 1797

comprises at least one active portion which is generally of substantially planar form ((figure 3 object 59)).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1797

4. Claims 1, 7-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. WO03/048072 (translation provided by US 7,138,168) in view of Merriman US 2,952,579.

5. For claims 1 and 11, the Fujita et al. reference discloses a filtration structure, in particular a particulate filter for exhaust gases of an internal combustion engine of the type comprising: at least first and second filtration elements which have a first and second face which are arranged opposite each other, respectively; a joint for connecting the faces which extends between the faces, this joint comprising a binding agent (figure 1b objects 12 and 8) the filtration elements are made of a ceramic material (column 6, lines 31-35) and the binding agent is made of ceramic cement (column 3, lines 55-56). The reference does not disclose the joint comprising reinforcement means which are embedded in a binding agent, characterized in that the reinforcement means comprises at least one mesh-like reinforcement element which has independent coherence and which comprises at least one active portion which is generally of substantially planar form.

6. The Merriman reference discloses the joint comprising reinforcement means which are embedded in a binding agent, characterized in that the reinforcement means comprises at least one mesh-like reinforcement element which has independent coherence and which comprises at least one active portion which is generally of substantially planar form (claim 1).

7. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Fujita et al. reference to include the joint

Art Unit: 1797

comprising reinforcement means which are embedded in a binding agent, characterized in that the reinforcement means comprises at least one mesh-like reinforcement element which has independent coherence and which comprises at least one active portion which is generally of substantially planar form (Merriman claim 1) because this provides a reinforcing means for increasing the strength of the adhesive bond.

8. For claim 7, the Fujita et al. reference discloses the binding agent having an active portion opposite two adjacent faces of the filtration element, the active portions being connected to each other (figure 1b objects 12 and 8. The reference does not disclose the reinforcement element comprises an active portion opposite two adjacent faces of the filtration element, the active portions being connected to each other.

9. The Merriman reference discloses the reinforcement element comprising an active portion on two sides of the element (claim 1) being used within the binding agent. The reference does not disclose the reinforcement elements active portion being on two adjacent faces of the element and being connected to each other. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference to include the reinforcement elements active portion being on two adjacent faces of the element and being connected to each other (as done by the adhesive within the Fujita et al. reference) because this provides greater strength on all sides of the element.

10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Fujita et al. reference to include the reinforcement element comprises an active portion opposite two adjacent faces of the

Art Unit: 1797

filtration element, the active portions being connected to each other (Merriman claim 1) because provides a greater structural integrity to the adhesive and therefore the filter.

11. For claim 8, the Fujita reference discloses the structure comprises at least one cell which comprises four filtration elements, and a common reinforcement element 3), having a sinuous shape, for the filtration elements, the common reinforcement element comprising at least three successive active portions which are arranged opposite adjacent faces of the filtration elements of the cell (figure 1b objects 12 and 8).

12. For claim 9, the Fujita reference discloses the at least first and second cells and a binding agent supporting between those cells (figure 1b objects 8 and 12). The reference does not disclose at least one active portion of the reinforcement element of the first cell being arranged opposite a face of a filtration element of the second cell.

13. The Merriman reference discloses the reinforcement element within the adhesive (claim 1).

14. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Fujita et al. reference to include the reinforcement element (Merriman claim 1) because this provides a reinforcing means for increasing the strength of the adhesive bond.

15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Fujita et al. reference to include at least first and second cells, at least one active portion of the reinforcement element of the first cell being arranged opposite a face of a filtration element of the second cell because by

Art Unit: 1797

moving around the reinforcement element within the honeycomb, the best placement in order to maintain structural integrity of the structure while limiting costs can be found.

16. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al. WO03/048072 (translation provided by US 7,138,168) and US 2,952,579 as applied in claim 1 above and further in view of Adiletta US 5,228,891.

17. For claim 2, the Fujita et al. reference does not disclose the active portion comprises a plurality of beams which are arranged substantially parallel with a first direction.

18. The Adiletta reference discloses the active portion comprises a plurality of beams which are arranged substantially parallel with a first direction (figure 3 object 59).

19. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Fujita et al. reference to include the active portion comprises a plurality of beams which are arranged substantially parallel with a first direction (Adiletta figure 3 object 59) because this provides support to the filtering element.

20. For claim 3, the Fujita et al. reference does not disclose the active portion comprises a plurality of cross-members which connect the beams and which are arranged substantially parallel with a second direction, distinct from the first direction.

21. The Adiletta reference discloses the active portion comprises a plurality of cross-members which connect the beams and which are arranged substantially parallel with a second direction, distinct from the first direction (figure 3 object 59).



Art Unit: 1797

22. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Fujita et al. reference to include the active portion comprises a plurality of cross-members which connect the beams and which are arranged substantially parallel with a second direction, distinct from the first direction (Adiletta figure 3 object 59) because this provides support to the filtering element.

23. For claim 4, the Fujita et al. reference does not disclose the total volume of the apertures delimited by the beams and the cross-members is greater than the total volume of the beams and the cross-members.

24. The Adiletta reference discloses the total volume of the apertures delimited by the beams and the cross-members is greater than the total volume of the beams and the cross-members (as can be easily seen figure 3 object 59).

25. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Fujita et al. reference to include the total volume of the apertures delimited by the beams and the cross-members to be greater than the total volume of the beams and the cross-members (Adiletta figure 3 object 59) because this allows the filter to be supported and for the flow of air.

26. For claims 5 and 6, the Fujita et al. reference does not disclose the reinforcement element is produced from a metal material and the reinforcement element is produced from a material which degrades at temperatures greater than 150°C.

27. The Adiletta reference discloses the reinforcement element is produced from a metal material and the reinforcement element is produced from a material which degrades at temperatures greater than 150°C (column 6, lines 19-31).

Art Unit: 1797

28. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Fujita et al. reference to include the reinforcement element is produced from a metal material and the reinforcement element is produced from a material which degrades at temperatures greater than 150°C (Adiletta column 6, lines 19-31) because this allows the supporting material to withstand high temperatures.

### ***Response to Arguments***

29. Applicant's arguments filed 07/31/2009 have been fully considered but they are not persuasive.

30. For claim 10, the Applicant argues that "the materials of the elements building up the structure of Merriman are not all the materials used in the present invention". More specifically the Applicant is referring to the reinforcement means.

31. The Examiner disagrees. The Applicant makes no specification within the claims 1 or 10, the exact material used within the reinforcement means. Therefore the Applicant is arguing a feature which has not been claimed.

32. For claim 10, the Applicant contends the Adiletta reference discloses "that plate 59 is not a reinforcement means of a joint bonding two filtration elements together, but rather a means for maintaining the particle filter 57 in position."

33. The Examiner disagrees. A means for maintaining the particle filter in position is also a reinforcement means. Furthermore nowhere within claim 10 or claim 1 does the applicant disclose that the reinforcement means is for joint bonding two filtration

Art Unit: 1797

elements together. Lastly it appears that there is means of which the mesh-like reinforcement would be able to perform the function of actually bonding the filtration elements together.

34. For claims 1 and 7-9, the Applicant argues that the Merriman reference "is directed towards construction materials. Thus it does not belong in the technical field of the present invention, namely exhaust gas filtration structures for motor vehicles."

35. The examiner disagrees. The art being used is the method of using adhesion materials to bond honeycomb structures, which is being used by both the Fujita and Merriman references and therefore the previous rejection stands. Furthermore it is well known in any art that placing a reinforcement material (such as a wire) within a cement mixture will reinforce the cement.

36. The Applicant contends "the materials of the elements building up the structure of Merriman are not at all the materials used in the present invention. In particular, the reinforcement means allows the thermal flux to propagate through the joint. Such a function is not disclosed by Merriman. In fact, Applicants submit that a glass fiber thread fabric cannot exhibit such a function" and "the thermosetting adhesive used in Merriman is operable in the range of 100 to 250 °F. This range is not compatible with a use in a particle filter subject to regeneration phase, where the temperature of the exhaust gasses is used around 900 °F and reaches 1900 °F during regeneration."

37. The examiner disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the materials used within the Applicant's invention, the

Art Unit: 1797

reinforcement means allows the thermal flux to propagate through the joint and the Applicant's invention being a particle filter subject to regeneration phase, where the temperature of the exhaust gasses is used around 900 °F and reaches 1900 °F during regeneration) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore the Fujita et al. reference is used to disclose the adhesive, not the Merriman reference, see previous office action (page 4, paragraph 5). The references should be considered in combination.

### ***Conclusion***

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1797

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMBER ORLANDO whose telephone number is (571)270-3149. The examiner can normally be reached on Mon.-Thurs. (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AO

/Walter D. Griffin/  
Supervisory Patent Examiner, Art Unit 1797